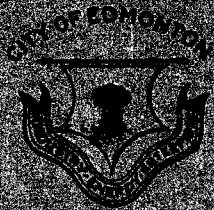


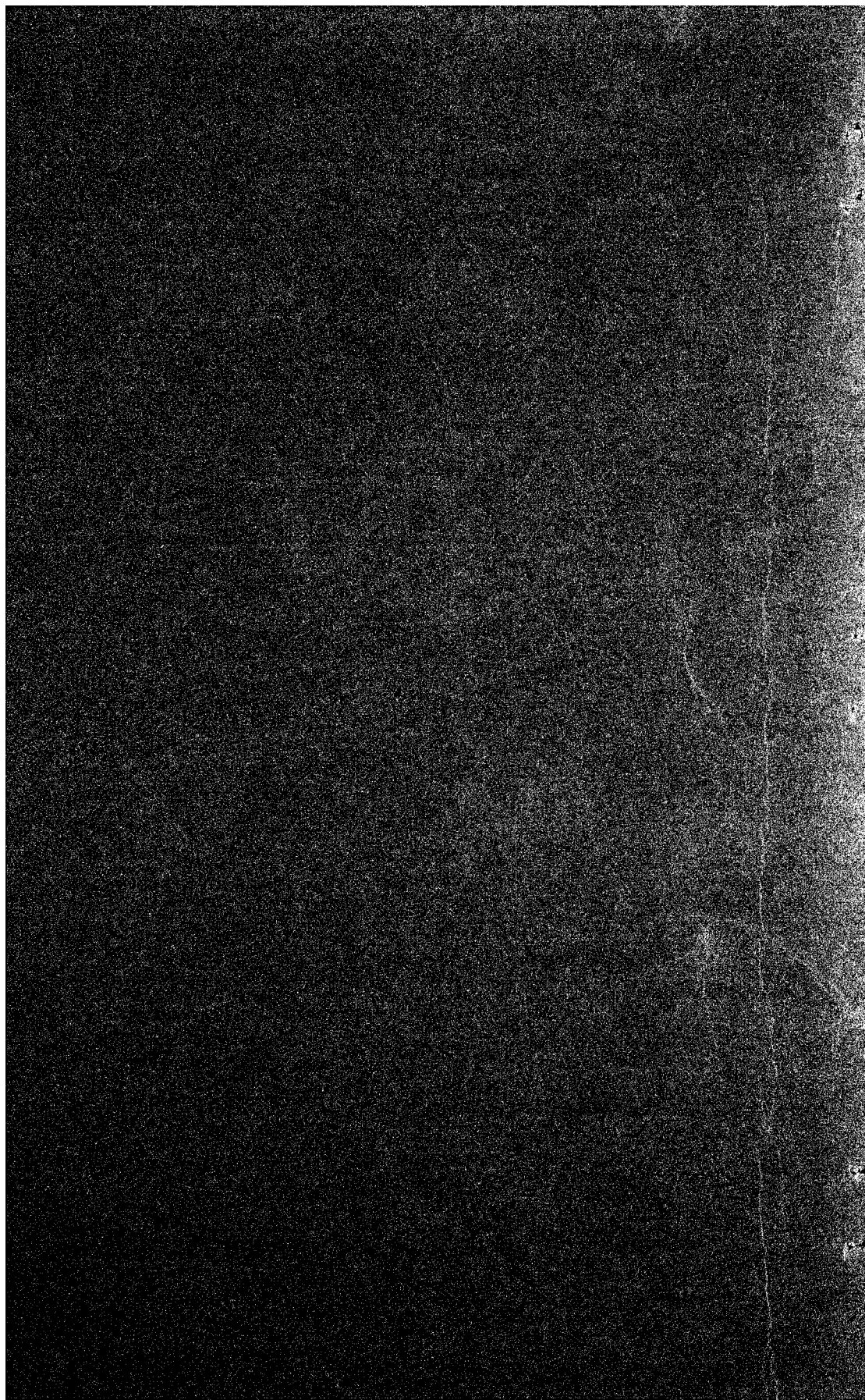
CITY *of*
EDMONTON

ALBERTA



BOARD *of* HEALTH
REPORT

1932



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Board of Health, 1932

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Dr. F. W. Crang (Public School Board)
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Secretary	S. Main, A.R. San. I.
Chief Health Inspector	W. R. Graham, A.R. San. I.
Health Inspector	J. H. Blackburn, A.R. San. I.
Health Inspector	T. E. Lord
Health Inspector	A. P. Methuen, A.R. San. I.
Health Inspector	J. D. Williams
Quarantine Officer	R. T. Anderson, A.R. San. I.
Chief Food Inspector	J. H. Part, V.S., M.D.V.
Meat Inspector	D. Morrison, V.S.
Dairy Supervisor	C. Ellinger, A.R. San. I.
Analyst	H. C. Graham, B.A.
Chief Public Health Nurse	Miss M. Griffith, R.N.
Public Health Nurse	Miss S. C. Christensen, R.N.
Statistician	Miss B. B. Murray
Stenographers	Miss A. Kellas, Miss C. Rose

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Annual Report of Medical Officer of Health

The Local Board of Health:

Gentlemen:

I beg to submit herewith the annual report of health conditions in Edmonton during 1932 and the report of the work carried on by the executive officers of this Board.

The unusually low death rate of the two preceding years was not maintained during 1932; though the rate, 7.91 was below the ten year average, 8.06. There was an increase in deaths from most of the principal causes but the greatest increase occurred in deaths from diseases of the heart. Cancer also showed a considerable increase. It seems probable that this condition is a reflection of the economic stress of the times. Analysing the deaths from the standpoint of age, we find that there were fewer deaths under 1 year; the increase of deaths affected most noticeably, the older age groups but, unfortunately the middle age groups contributed largely to the increase. Economic stress shows again in the continued increase in suicides.

The year brought one encouraging record, the lowest infant mortality that the city has enjoyed, 44.2 per thousand as compared with 64.8, the average for the past 10 years. Maternal mortality increased, there being 7 deaths from puerperal causes—one more than in the preceding year.

Measles accounted for 3,654 cases of the 5,800 cases of communicable disease. We were fortunate that the peak of the disease appeared in the warmer month of spring and early summer. Serious complications were comparatively rare and the death rate was very low.

There were only 3 cases of Diphtheria and no deaths from this cause. I take this to be evidence of the value of the anti-diphtheria campaign that has been carried on for some years. None of the patients had had toxoid.

The 336 cases of Venereal disease are not all new within the year. The majority have been under treatment for some time and have only recently been reported in accordance with new health laws.

In 1931 there were 71 cases of Tuberculosis reported; 57 in 1932. I believe that the decrease is significant in that it reflects the activities of the service carried on by the Kinsmen's Club, the extended use of the diagnostic service and the increasing hospitalization of these patients; but I feel that it would be over optimistic to expect the downward trend to continue in the face of economic pressure.

I recommend for your attention the report of activities in other phases of public health nursing, the child welfare work and prenatal work. That section includes a brief summary of that extremely important work, bedside nursing, which is carried on by the Victorian Order of Nurses.

Space does not permit any extended reference to the reports on Milk control, Food Inspection and Sanitary inspection but these reports carry their own story and require little comment, except, that I recommend that they be read carefully.

Yours respectfully,

R. B. JENKINS,

Medical Officer of Health.

FINANCIAL STATEMENT

EXPENDITURE

	1932	1931
Salaries	\$28,365.79	\$29,692.86
Printing, Postage, Stationery	746.29	900.82
Transportation	4,765.95	5,059.26
Telephones	208.76	206.75
Miscellaneous	390.53	501.04
Uniforms	214.31	244.00
Communicable Disease	186.79	166.81
Food and Dairy Inspection	165.24	273.95
	<u>\$35,043.66</u>	<u>\$37,045.49</u>

REVENUE

Inspection Fees	\$ 428.00	\$ 354.50
Balance on cost of operation	<u>\$34,615.66</u>	<u>\$36,690.99</u>

SUMMARY OF STATISTICS

	1932	1931
Population (1932 census)	78,387	79,059
Area of city (including 1,000 acres of water)	26,520	26,520
Persons per acre of land	2.993	3.08
School Enrolment	18,353	16,009
Natural increase of population	928	1,160
Cost per capita	0.45	0.46
Births, excluding stillbirths	2,340	2,424
Births, city parentage only	1,561	1,671
Births, city parentage only, rate per 1,000 pop.	19.5	20.88
Stillbirths	52	53
Stillbirths, rate per 1,000 births	20.16	21.55
Deaths, excluding stillbirths	947	810
Deaths, citizens only	633	511
Deaths, citizens only, rate per 1,000 population	7.91	6.39
Deaths, citizens under 1 year of age	69	93
Infant Mortality, rate per 1,000 living births	44.2	55.65
Number of deaths from childbirth	7	6
Maternal Mortality, per 1,000 births	4.47	3.59
Marriages	1,183	1,226

VITAL STATISTICS

Births

Male, 799; Female, 762; Total1,561

Born in Hospital, 1,343; born home, 217.

Physician attending, 1,537; unattended, 24.

Maternal Parentage—

Of the 1,561 City Births:—

708 or 45.35%—Canadian.

396 or 25.37%—British.

149 or 9.55%—U.S.A.

307 or 19.73%—Foreign.

70 or 4.5% of births were illegitimate, of these:—

41 or 58.6 %—Canadian.

9 or 12.9 %—British.

4 or 5.7 %—U.S.A.

15 or 21.4 %—Foreign.

1 or 1.4 %—Unstated.

Stillbirths

Male, 27; Female, 25; Total	52
Born in Hospital, 46; unattended, nil.	
Age of Mothers:—	
15 years to 19 years	3
20 years to 24 years	9
25 years to 29 years	15
30 years to 34 years	6
35 years and over	9
Nationality of Mothers:—	
Canadian	25
British	12
United States	5
Foreign or unstated	10
Cause of Foetal Death:—	
Dystocia	16
Prematurity	5
Malformation	5
Toxemia of Pregnancy	1
Other diseases or conditions of Mother	25

DEATHS

Male, 362; Female, 271; Total	633
Canadians	314
British	205
United States	34
Foreign	79
Unstated	1

Deaths under 1 year of age:—

Total, 69; Male, 48; Female, 21.

Rate per 1,000 living births, 44.2.

COMPARATIVE SUMMARY OF THE PRINCIPAL CAUSES OF DEATH

1932				1931			
		Rate per		Rate per			
		No.	% Total	100M	No.	% Total	100M
				pop.			pop.
90- 95	Diseases of the Heart	92	14.5	115	63	12.32	79
45- 53	Cancer	71	11.2	89	54	10.56	67
163-198	External Causes	44	6.95	55	47	9.19	58.7
11	Influenza	39	6.2	49	22	4.35	27
23- 32	Tuberculosis	37	5.84	46	23	4.50	29
107-109	Pneumonia	32	5.05	40	27	5.28	33
130-132	Acute & Chronic Nephritis	30	4.73	38	24	4.69	30
158-161	Early Infancy	25	3.95	31	31	6.08	39
82	Apoplexy	22	3.47	28	16	3.13	20
119-120	Diarrhoea	21	3.3	26	16	3.13	20
121	Appendicitis	13	2.05	16	16	3.13	20
157	Malformation	8	1.26	10	15	2.93	19
140-150	Puerperal State	7	1.10	8.7	6	1.17	7.5
	Other Causes	192	30.4	241	151	29.56	188.8
		633			511		

In 1932 as in 1931 the two highest death rates were Heart Disease and Cancer, each showing a considerable increase.

Of the 44 deaths from External Causes (27 male and 17 female), 16 suicides, 1 homicide and 27 accidents.

INFANT MORTALITY

CAUSE OF DEATH

By Season

By Age

	January	February	March	April	May	June	July	August	September	October	November	December	1st Day	1st Week	2nd Week	3rd Week	4th Week	Total Under One Month	1-3 Months	4-6 Months	7-9 Months	10-12 Months	Outside Registered	Total
1 11a Influenza with pneumonia	2	1			1							2							1	1			1	1
11c Influenza with cardiac insufficiency	3	1	1	1											1				1	1			2	5
15 Erysipelas	1								1										1	1			1	1
23 Tubercular Meningitis										1													1	1
24 Tubercular Meningitis with Heart Failure			1																				1	1
34a Congenital Syphilis									1														1	1
4 79 Meningitis					1							1							1	1			1	2
6 86 Convulsions (Cold and Indigestion)	1		1																1	1			1	1
7 101 Acute Gastro Enteritis, Suppurative Adenitis	1					1																	1	1
8 106a Bronchitis	2				2								1					1	1	1			4	8
107a Broncho-Pneumonia	4	3				1	1		1	1	2					1		1	1	1			4	8
108 Lobar Pneumonia	2	2			2	1	2	2	3	2	3	1			1			2	5	5	2	2	8	24
9 119 Gastro Enteritis	16	1	4	2	2	1	2	1										2	5	5	2	2	8	24
122b Intussusception	1								1					1				2	2		1		1	1
167a Congenital Hydrocephalus	2	1		1																			2	2
167b Spina Bifida	1		1							1									1				2	3
167c Congenital Malformation of the Heart	3	2	1	1									1	2				3					2	8
167e Acute Peritonitis	2				1				1	1	1							2	2				1	3
168 Congenital Inanition	2																	1	1				1	2
159 Prematurity	19	1	3	6	3	4	2	4	5	3	12	3					2	17	2				12	81
160a Asphyxia Neonatorum (birth injury)																							1	1
160b Cerebral Haemorrhage (birth injury)																							1	1
161a Atelectasis	2		1															2					1	2
161b Icterus of the New Born	1				1																		1	1
161c Maternal Toxaemia (Eclampsia)	2	2	1	1							2							1	2				1	2
	69	6	17	13	11	7	7	5	9	6	14	10	17	7	4	4	3	35	16	9	4	5	42	111

Under 1 year of age there were 69 deaths or 10.9% of the total deaths. The highest number of deaths in adult life were between ages of 74-79—57 deaths or 9.0% of total. 281 deaths or 44.39% were over 64 years of age.

COMMUNICABLE DISEASE

	1932		1931	
Notifiable	Cases	Deaths	Cases	Deaths
Acute Poliomyelitis			7	1
Cerebro-spinal Meningitis (Meningococcic)	2		4	1
Diphtheria	3		30	1
Scarlet Fever	41		83	1
Smallpox			20	
Chickenpox	859		812	
Measles	3654	4	31	
Mumps	491		147	
Rubella	3		6	
Typhoid			4	
Para-Typhoid Fever	3		2	
Whooping Cough	306		224	
Erysipelas	23	2	37	
Tuberculosis (Pulmonary)	57	31	71	17
Tuberculosis (other forms)	7	6	5	3
Pneumonia, Acute Lobar	5	15	9	8
Dysentery	1		2	3
Venereal Disease	336	5	6	1
Trachoma			1	
Puerperal Septicaemia	1	1	2	5
Septic Sore Throat	8	2		
	5800	66	1503	41
Non-Notifiable				
Diphtheria Carriers	2		22	
Typhoid Carriers	1	0		
Purulent Infections		6		
Influenza		39		
Trench Mouth	3			
	6	45	22	

The 5,800 cases of communicable disease give a morbidity rate of 72.5 per one thousand population.

2,227 cases or 38.4% were pre-school children, 2,857 cases or 49.25% were school children and 716 or 12.35% were adults.

There were 28,217 school days lost on account of communicable disease, (not including July and August cases or contacts) or an average cost per pupil of 42c, a loss of approximately \$12,000. The diseases mostly responsible were measles, mumps, chickenpox, whooping cough and scarlet fever.

The 2,857 cases among the school population, Grades 1 to 8, of 12,757 pupils, give a morbidity rate of 224 per thousand school children.

ISOLATION HOSPITAL

There were admitted 385 patients, discharged 352, died 31 and remaining in hospital at end of year, 34.

The disease hospitalized included Scarlet Fever, 30, Erysipelas 30, Diphtheria 6, Diphtheria Carriers 1, Tuberculosis 13, Meningitis 13 (all forms) of which 5 died, Typhoid Fever 3, Poliomyelitis 1 and 73 suspect and non-infectious cases.

IMMUNIZATION

	Smallpox Vaccination	Diphtheria Immunization	Whooping Cough, Vacc.
Local Board of Health	131	95	5
Public Schools		1246	0
Separate Schools	233	173	0
Total	364	1514	5

TUBERCULOSIS NURSING SERVICES

Total visits, 2,242; Positive, 1,194; Suspects, 286; Contacts, 165.

New Cases—Positive, 104; Suspects, 33.

Clinic Examinations—Total 309.

PUBLIC HEALTH NURSING

The following visits have been made:—

	1932	1931
Child Welfare Visits	3433	2390
Pre-natal Visits	376	392
Post-natal Visits	256	195
New Births Visited	163	115
Investigation Visits	140	113
	4368	3205

DISABILITIES FOUND DURING DISTRICT VISITS

	Pre-School			
	Babies	Age	School Age	Adults
Infectious Disease	61	117	38	8
Eye Conditions	7	5	1	0
Lymph Glands	12	56	20	1
Parasites	0	5	5	3
Endocrin Gland	1	6	2	5
Genito Urinary System	8	11	0	1
Vascular System	0	0	0	4
Skin, Muscle, Bone and Joints	53	11	0	1
Infectious Conditions	7	3	1	4
Metabolism	14	30	0	0
Digestive System	52	13	1	2
Respiratory System	5	3	0	1
Congenital	4	0	0	0
Other Conditions	3	0	0	1

PRE-NATAL AND POST-NATAL SERVICE

Pre-natal Visits	376
Post-natal Visits	256
New Cases Admitted	201
Discharged	219
On Roll, December, 1932	44

CHILD WELFARE CLINICS

	1932	1931
Clinics held during the year	100	102
Babies in attendance	4556	4797
Pre-school in attendance	1111	1184
Total Number in attendance	5667	5852
Average attendance	57	57
New babies admitted	787	898
New pre-schools admitted	157	217
Babies referred to family doctor	64	46
Pre-schools referred to family doctor	38	31

Two Well Baby Clinics are held each week in the Civic Block, one of the following pediatricians has been in attendance at each Clinic, Dr. F. J. Folinsbee, Dr. D. B. Leitch and Dr. Folinsbee Newell.

The follow-up work by the nurses in the homes is a most important phase of the Public Health Nurses' duties.

Through the generosity of various charitable organizations in the city, many layettes have been made for new babies and clothes given to other members of the family.

Excellent co-operation exists between all Public Health workers.

The report of the VICTORIAN ORDER OF NURSES shows: Total visits, 7,552. These include—Pre-natal, 385; Obstetrical, 677; Infants of Obs. cases, 707; Post-natal, 723; Infants of Post-natal, 675; Delivery visits, 306; Clinics and classes, 478 Chronics, 257.

SANITARY INSPECTION

INSPECTIONS

892 complaints were received from the public, of these 639 were found to be justified upon inspection.

4,818 verbal notices were issued for the abatement of nuisances and 1,753 written notices making a total of 6,571.

25,529 inspections were made of public and private premises, 3,520 re-inspections were made.

LICENSES

1,257 licenses for bake shops, barber shops, bath houses, butcher shops, candy and ice cream parlors, dairies, dog kennels, entertainment halls, fish dealers, fur farms, hair dressing and manicuring, laundries, lodging houses, pool, billiard and dance halls, restaurants, vegetable and fruit wagons, etc., were investigated and reports turned over to License Inspector for action.

SEWER AND WATER INSTALLATION

Fifty sewer and water notices were issued, 12 notices were complied with. Figures from the Building Inspector show that 243 plumbing permits were issued. Of these 57 were for old buildings.

HOUSING SUPERVISION

Regular inspections are made of the numerous rooming houses in the city. All rooms are measured and placarded as to number allowed in each room. Cards prohibiting spitting are also put up. Night inspections are carried out when necessary.

BATH HOUSE AND DISINFECTING STATION

20,697 baths were given. Of this number 251 were verminous and 765 were dis-infested. 15,481 men washed their clothing and 42,012 clothing units were washed. 244 cases of Scabies were treated and their clothing and bedding dis-infested.

SCAVENGING

Scavenging work has been carried out satisfactorily during the year and the few complaints received have been investigated and action taken where necessary. Clean-up work commenced on May 2 and was completed on May 26. 1,116 loads of refuse were removed from the North Side and 317 from the South Side. 26 rakers and 21 teams were employed.

COW SHEDS AND STABLE INSPECTION

All premises where cattle are kept in the city are checked up regularly by the inspectors and instructions issued where necessary for repairs and improvements to be made to the premises.

WATER

137 samples of water were taken; 47 wells were placarded, 13 ice samples were taken and eight ice houses and ice fields were inspected.

INFECTIOUS AND CONTAGIOUS DISEASES

A record from the 1st of May was kept by the Inspectors of the houses quarantined and released from quarantine, 1,790 homes were visited.

INDUSTRIAL HEALTH SERVICE

Inspections were made of the business premises where help was employed and with the exception of a few cases employers co-operated with us in the improvement of working conditions for their employees.

ENFORCEMENT OF REGULATIONS

The policy laid down in 1931 of having delinquents report to the office re by-law infractions and going into the matter thoroughly with them in order to do without police action has worked very successfully during the past year.

FOOD INSPECTION

No material change has been made in this department since the last Annual Report. Each year there is an increased need for the provision of a Municipal Abattoir, which would eliminate much that is undesirable under present conditions.

The increase of 12,671 lbs. in the total of condemned food is due to the condemnation of a whole car of water melons, which through some mistake "enroute" from Florida, had not been iced, and also to the increase of 2,145 in the total number of hogs slaughtered. One group of ten heavy breeding sows were found on slaughter to be 100% Tubercular. 70% were generalized cases, which were condemned.

MEATS INSPECTED AND CONDEMNED

	No. Inspected	Portions	CONDEMNED	
			Carcasses	Weight
Beef	1,240	207	8	8,268
Veal	2,242	18	9	1,086
Mutton	1,910	152	3	680
Pork	6,574	2,114	11	28,356
	<u>11,966</u>	<u>2,491</u>	<u>31</u>	<u>38,390 lbs.</u>

Other Foodstuffs Condemned:

Poultry	323
Fish	95
Watermelon	24,000
	<u>62,808 lbs.</u>

Foodstuffs Condemned by Health Inspectors:

Canned Goods	2,386 lbs.	1 oz.
Meat	118 lbs.	8 oz.
Fish	81 lbs.	12 oz.
Vegetables	48 lbs.	oz.
Candy	26 lbs.	oz.
Fruit	399 lbs.	oz.
Fowl	71 lbs.	oz.
Pickles	50 lbs.	oz.
Sundries	52 lbs.	8 oz.
	<u>3,232 lbs.</u>	<u>13 oz.</u>
		<u>3,232 lbs. 13 oz.</u>
		<u>66,041 lbs. 13 oz.</u>

Number of visits made, 4,150.

Complaints received from the public, 34.

Complaints justified, 20; Complaints unjustified, 14; Total, 34.

DAIRY INSPECTION

The following four hundred and five applications for dairy licenses comprise the general milk supply and come under my report as follows:

	Totals	Granted	Refused
Local and within 15 mile radius of city (Milk)	303	301	2
More distant points (cream)	102	100	2
	405	401	4

During the year 236 licenses of milk producers who ship milk to pasteurizing plants were temporarily suspended on account of the continued excessively high bacterial content of the milk as determined by the Reductase Tests carried out weekly at the milk plants under my supervision.

During the past year the Milk Division has been and still is in a transitory stage of milk control and the milk industry is also making preparations for the proposed grading system of the new milk ordinance. Those members of the industry who have met all requirements are now anxious to see the new ordinance adopted in order that they may get full credit for the good work they are doing and not be compelled to continue to compete on an equal basis with milk which is produced under less favorable sanitary conditions. Under the proposed grading system the grades are determined by this Department and are printed on the caps of the milk bottles and are easily recognized by the consuming public. If the distributor does not continue to meet all requirements, he is degraded by this Department, and is then compelled to use a bottle cap of a lower grade until all requirements have again been met. Experience in other cities has shown that the public are quick to recognize the meaning of the Grade labels and the demand has always been for the highest grade of milk. The degrading principle leaves the dairyman to explain to the consumer as to why he has a low grade on his milk bottle. The public thus become an enforcing agency, this department seeing to it that the milk is properly graded according to the ordinance. Milk ordinances which depend on the "force" system have almost universally been violated and actually amounted to little more than paper control. Under the proposed grading system more improvement in milk sanitation may be looked forward to in the course of one year than in all the years that there has been a milk ordinance in this city or in the majority of other cities on this continent.

Commencing early in 1930 our milk producers received instruction mostly by mail in the practical production and handling of milk under more sanitary conditions. The bulletins being written by this branch of the Department. In order to ascertain whether the milk producers who ship milk to plants to be pasteurized were putting their knowledge into practice the results of the reductase and sediment tests carried out weekly by the pasteurizing plants were observed by this Department. Progress during 1930 was rather slow with the result that the co-operation of the milk plants was obtained whereby the tests were carried out under the supervision of this branch of the Department. Limitations of space compel the omission here of the results of the weekly reductase tests and they are therefore shown as a monthly average.

The reductase tests were carried out according to the Standard Methods of Milk Analysis and the following table shows the percentage of milk producers who shipped milk to pasteurizing plants which was in Class 1 under the above standards when received at the milk plants.

	1930	1931	1932
January	Incomplete	90.82	95.11
February	72.	90.55	95.10
March	75.5	91.51	95.67
April	77.5	87.21	95.75
May	65.	87.01	91.13
June	65.5	79.88	85.20
July	44.	77.29	97.21
August	64.	83.92	91.54
September	88.	92.18	95.38
October	91.5	97.19	97.95
November	88.	97.19	96.35
December	88.	91.33	97.
Average	74.4	88.84	94.53

Class 4 milk has been completely eliminated whilst there were but eight individual shipments of Class 3 milk during 1932 as revealed by the weekly tests. From the literature available regarding similar testing in several other cities, the above report shows greater and more rapid progress than has been previously reported in the literature later referred to. The improvement made in keeping quality during the summer months being most marked, for it is during the warm months that the most difficulty is encountered in obtaining improvement.

During the year approximately 12,600 samples of milk were submitted to the Reductase test under the supervision of this branch of the Department. Approximately 24,500 samples have been tested since the supervision began in 1931.

Three educational bulletins were written and mailed to all milk producers who ship milk to pasteurizing plants. Six hundred and twenty-seven inspections were made of dairy farms at which time the proposed new milk ordinance was further explained and discussed. Sixty-two inspections were made of pasteurizing plants. One mass meeting of milk producers was attended to explain the new milk ordinance. Several conferences with the Executive Committee of the Edmonton District Milk and Cream Producers' Association were also held.

There was a small outbreak of Scarlet Fever amongst the families of two dairy farmers who ship milk to pasteurizing plants. The dairy licenses being suspended until they were out of quarantine.

One license of a milk shipper to pasteurizing plants was suspended from September 16th to October 11th on account of cow-pox in the milking herd.

The supervision of the Reductase Test has again resulted in a number of cows which were infected with a Mastitis being removed from the milking herds for slaughter.

Since 1922 all milk and cream which is consumed in fluid form within the City of Edmonton has been produced from cows which are Tuberculin tested by the Dominion Department of Agriculture under what is known as the Edmonton Municipal Tuberculosis Order. During the fiscal year April 1st, 1931, to March 31st, 1932, 11,874 cattle were Tuberculin tested. The average reaction again being 0.2%. All reacting animals were slaughtered under inspection. Mention is again made that Alberta is still the only province in Canada which has not yet taken advantage of the facility for having herds tuberculin tested under the Restricted Area Plan.

The appreciation is again acknowledged of the co-operation and assistance given by Dr. H. R. Thornton, Professor of Dairying, University of Alberta, Edmonton, in the carrying out of bacteriological surveys at the farms of milk producers who were also having difficulty with the Reductase Test and where milk having a short reduction time yet showed a low plate count. The appreciation is also acknowledged of the co-operation of the Provincial Laboratory of Alberta in carrying out the Reductase Test in addition to the Standard plate count on the bottled raw milk, where milks having a reduction time of less than five and a half hours and a low plate count, were also met.

Some data relating to costs of dairy and milk inspection services will be of interest particularly as there is a somewhat general impression that this is a costly item in city administration expenditure. A per capita cost of six to ten cents is generally considered reasonable, which latter figure would cover bacteriological laboratory service. Expressed in another way, a cost to citizens equal to the retail price of one quart of milk per year is a very reasonable sum to pay for the protection offered by an efficiently operated public health milk control service. The present per capita cost to the citizens of Edmonton for dairy and milk inspection service is .2 cents, (one-fifth of one cent) which may be considered a strikingly low figure, especially in view of the milk improvement work which is being done.

LITERATURE CITED

Milk Improvement by Methylene Blue Reductase Test Bulletins of Dairy Research Bureau of the Matthews Co.

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ANALYST'S REPORT ON MILK INSPECTION, ETC.

During the year there were taken 1,232 samples of retail milk, an increase over the previous year of ninety samples. The results of the bacterial examination are as tabulated. The samples which could not be counted on account of the growth of spreader organisms are not taken into account in arriving at the percentages in each group.

	Special	15,000 40,000	40,000 100,000	100,000 400,000	Over 400,000	Too numerous Spreaders to count	Total
January	58	9	5	0	0	1	73
February	72	8	7	1	0	0	88
March	102	13	2	0	0	0	117
April	79	8	5	3	0	1	98
May	85	12	3	3	0	0	103
June	99	10	3	1	1	0	114
July	76	11	3	3	0	1	96
August	90	14	6	5	0	3	120
September	62	9	5	3	0	7	88
October	82	14	9	3	0	0	111
November	101	11	11	2	0	1	130
December	70	9	9	3	0	1	94
Total	976	128	68	27	1	14	1232
Per Cent.	79.3	10.4	5.45	2.20	1	1.5	

The average sediment mark, out of a possible 10, for 1,219 samples was 8.88 as compared to 8.77 for the previous year.

The average butter fat (1,122) was 3.84% as compared to 3.82% last year. The average solids not fat (1,122 samples) was 8.74 as compared to 8.65 last year.

During the year there were 160 special milk samples taken, the average butter fat was 4.70%. There were 116 cream samples taken. The average butter fat was 26.1%; 114 of these cream samples were examined for bacteria count.

These milk samples included a great many samples of milk containing added cream for hotel dining car and restaurant use and hence the butter fat average is much higher than for normal milk. One hundred and fifty-eight of these samples were also examined for bacteria count.

Quite a satisfactory increase is noted in the number of samples with bacteria counts of fifteen thousand and under. Also the number of milk supplies which qualified in our grading system every month of the year has increased to eighteen. Three different dairies never had a count over ten thousand during the year.

Since beginning our system of classifying the various milk supplies we are quite satisfied that it has been very useful in making for needed improvements. However the marks given for equipment were based on the report of the Dairy Inspector using a system of marking which has since been discarded. We will therefore have to have special markings made or revise our basis of scoring.

SWIMMING POOLS

There were 214 samples of water taken for examination from the swimming pools, of these nine samples or 4.2% gave a count of over 200 bacteria per cubic centimeter. No sample during the year gave a positive colon bacillus test. Tests were also made at the swimming pool for free chlorine and chemical test solutions made up and supplied to the various pools as needed.

SEWAGE DISPOSAL

The operation of the sewage plants has taken a lot of time and attention. Chemical tests were carried out at all the plants but special attention given to No. 4 plant which has been giving trouble with odors. For three or four weeks a chlorinating outfit was operated at a packing plant contributing sewage to this plant.

